

AMENDMENTS TO THE CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF THE CLAIMS:

1-10. (Canceled).

11. (Currently Amended) A method for recognizing a visual obstruction using an image sensor associated with a vehicle, comprising:

recording an image by the image sensor, wherein the image sensor is focused on an external region beyond the vehicle such that a visual obstruction on the vehicle is imaged;

analyzing the image recorded by the image sensor, wherein at least one of a presence and a type of a visual obstruction is determined by the analysis of the image, wherein the analysis includes measuring a blurriness of at least a portion of the image;

producing a signal which indicates one of the presence and the type of the visual obstruction; and

controlling downstream systems based on the signal;

wherein an analysis of at least one image recorded after an initial wiping operation on a windshield of a motor vehicle is used to determine whether to initiate a next wiping operation, and

wherein the determination regarding the next wiping operation is based on blurriness of a first image that was recorded immediately after the initial wiping operation in comparison to blurriness of an image recorded subsequent to the first image.

12. (Previously Presented) The method of claim 11, wherein the at least one of the presence and the type of the visual obstruction is determined by measuring a relative blurriness of different parts of the image.

13. (Previously Presented) The method of claim 11, wherein the blurriness is measured based on one of a contrast spectrum of the image, a Fourier spectrum, and an autocorrelation function of the image.

14. (Previously Presented) The method of claim 11, wherein the at least one of the presence and the type of visual obstruction is determined based on a measured distribution of the blurriness by comparison with reference distributions.

15. (Canceled).

16. (Canceled).

17. (Previously Presented) The method of claim 11, further comprising:
turning on a windshield light if a scene has a contrast below a predetermined threshold.

18. (Canceled).

19. (Currently Amended) A device for identifying a visual obstruction, comprising:
an image sensor for recording an image, wherein the image sensor is focused on an external region beyond the vehicle such that a visual obstruction on the vehicle is imaged;
and
an evaluation unit for analyzing the image recorded by the image sensor;
wherein the evaluation unit outputs a signal that indicates at least one of a presence and a type of the visual obstruction based on the analysis of the image, wherein the analysis includes measuring a blurriness of at least a portion of the image; and
wherein the signal is used to control downstream systems, and
wherein the determination regarding the next wiping operation is based on blurriness of a first image that was recorded immediately after the initial wiping operation in comparison to blurriness of an image recorded subsequent to the first image.

20. (Previously Presented) The device of claim 19, wherein the downstream systems include at least one of windshield wipers, windshield heating systems, and windshield washer systems.

21. (Previously Presented) The device of claim 19, wherein the at least one of the presence and the type of the visual obstruction is determined by measuring a relative blurriness of different parts of the image.

22. (Previously Presented) The device of claim 19, wherein the blurriness is measured based on one of a contrast spectrum of the image, a Fourier spectrum, and a autocorrelation function of the image.

23. (Previously Presented) The device of claim 19, wherein the at least one of the presence and the type of visual obstruction is determined based on a measured distribution of the blurriness by comparison with reference distributions.

24. (Previously Presented) The device of claim 19, wherein an analysis of at least one image recorded after an initial wiping operation on a windshield of a motor vehicle is used to determine whether to initiate a next wiping operation.

25. (Canceled).

26. (Previously Presented) The device of claim 19, further comprising:

an arrangement to turn on a windshield light if a scene has a contrast below a predetermined threshold.

27. (Currently Amended) ~~The device of claim 19, wherein:~~ A device for identifying a visual obstruction, comprising:

an image sensor for recording an image, wherein the image sensor is focused on an external region beyond the vehicle such that a visual obstruction on the vehicle is imaged;
and

an evaluation unit for analyzing the image recorded by the image sensor;

wherein:

the evaluation unit outputs a signal that indicates at least one of a presence and a type of the visual obstruction based on the analysis of the image, wherein the analysis includes measuring a blurriness of at least a portion of the image,

the signal is used to control downstream systems,

the downstream systems include at least one of windshield wipers, windshield heating systems, and windshield washer systems,[[;]] [[and]]

the blurriness is measured based on one of a contrast spectrum of the image, a Fourier spectrum, and a autocorrelation function of the image, and

an analysis of at least one image recorded after an initial wiping operation on a windshield of a motor vehicle is used to determine whether to initiate a next wiping operation, and wherein the determination regarding the next wiping operation is based on blurriness of a first image that was recorded immediately after the initial wiping operation in comparison to blurriness of an image recorded subsequent to the first image.

28. (Previously Presented) The device of claim 27, wherein the at least one of the presence and the type of the visual obstruction is determined by measuring a relative blurriness of different parts of the image.

29. (Previously Presented) The device of claim 27, wherein the at least one of the presence and the type of visual obstruction is determined based on a measured distribution of the blurriness by comparison with reference distributions.

30. (Canceled).

31. (Previously Presented) The device of claim 27, further comprising:

an arrangement to turn on a windshield light if a scene has a contrast below a predetermined threshold.

32. (Currently Amended) ~~The method of claim 11,~~ A method for recognizing a visual obstruction using an image sensor associated with a vehicle, comprising:

recording an image by the image sensor, wherein the image sensor is focused on an external region beyond the vehicle such that a visual obstruction on the vehicle is imaged;

analyzing the image recorded by the image sensor, wherein at least one of a presence and a type of a visual obstruction is determined by the analysis of the image, wherein the analysis includes measuring a blurriness of at least a portion of the image;

producing a signal which indicates one of the presence and the type of the visual obstruction; and

controlling downstream systems based on the signal;

wherein:

the downstream systems include at least one of windshield wipers, windshield heating systems, and windshield washer systems,[[;]] [[and]]

the blurriness is measured based on one of a contrast spectrum of the image, a Fourier spectrum, and a autocorrelation function of the image, and

wherein an analysis of at least one image recorded after an initial wiping operation on a windshield of a motor vehicle is used to determine whether to initiate a next wiping operation, and wherein the determination regarding the next wiping operation is based on blurriness of a first image that was recorded immediately after the initial wiping operation in comparison to blurriness of an image recorded subsequent to the first image.

33. (Previously Presented) The method of claim 32, wherein the at least one of the presence and the type of the visual obstruction is determined by measuring a relative blurriness of different parts of the image.

34. (Previously Presented) The method of claim 32, wherein the at least one of the presence and the type of visual obstruction is determined based on a measured distribution of the blurriness by comparison with reference distributions.

35. (Canceled).

36. (Previously Presented) The method of claim 32, further comprising:

turning on a windshield light if a scene has a contrast below a predetermined threshold.